PTO/SB/08A (12-07)

Approved for use through 12/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE er the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

 Complete if Known

 Application Number
 10/820,328

 Filing Date
 April 7, 2004

 First Named Inventor
 John Santhoff

 Art Unit
 2611

 Examiner Name
 Curtis B Odom

(Use as many sheets as necessary)

stitute for form 1449/PTO

Sheet 1 of 6 Attorney Docket Number 00125

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2 (f known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 5,278,862	01-11-1994	Timothy J. Vander Mey	
		US- 5,485,040	01-16-1996	Philip H. Sutterlin	
		US- 5,523,760	06-04-1996	McEwan	
		^{US-} 5,554,968	09-10-1996	Raymond Lee	
		^{US-} 5,744,526	06-30-1998	Michael B Propp et al	
		^{US-} 5,822,678	10-13-1998	Evanyk	
		^{US-} 5,828,946	10-27-1998	Feisullin et al.	
		^{US-} 5,835,054	11-10-1998	Warhus et al.	
		^{US-} 5,896,556	04-20-1999	Moreland et al.	
		^{US-} 5,944,842	08-31-1999	Propp et al.	
		^{US-} 5,995,534	11-30-1999	Fullerton et al.	
		^{US-} 6,140,911	10-31-2000	Fischer et al.	
		^{US-} 6,218,979	04-17-2001	Barnes et al.	
		^{US-} 6,275,045	08-14-2001	Eloy	
		^{US-} 6,360,075	03-19-2002	Fischer et al.	
		^{US-} 6,384,773	05-07-2002	Martin et al.	
		^{US-} 6,441,695	08-27-2002	Robert Flake	
		^{US-} 6,492,897	12-10-2002	Richard A Mowery Jr.	
		^{US-} 6,492,904	12-10-2002	Richards	

		FORE	IGN PATENT DOCL	IMENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	-6
		Country Code ³ "Number ⁴ "Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T
		WO 02/31986	04-18-2002	XtremeSpectrum		
		WO 02/49245	06-20-2002	Pulse~LINK		
		WO 96/09694	03-28-1996	Fullerton et al.		
		EP 1414241	04-28-2004	Di Zenobio		
		·				L

		,
Examiner	Date	
Signature	Considered	
Signature		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Approved for use through 12/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PTO/SB/08A (12-07)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Complete if Known Substitute for form 1449/PTO Application Number 10/820,328 Filing Date April 7, 2004 INFORMATION DISCLOSURE First Named Inventor John Santhoff STATEMENT BY APPLICANT Art Unit 2611 (Use as many sheets as necessary) Curtis B Odom Examiner Name 00125

of |6

Sheet |2

Attorney Docket Number

			U.S. PATEN	T DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ^{2 (f known)}			r igures Appear
		^{US-} 6,496,104	12-17-2002	Kline	
		^{US-} 6,512,474	01-28-2003	Pergande	
		^{US-} 6,515,622	02-04-2003	Izadpanah et al.	
		^{US-} 6,529,166	03-04-2003	Kanamaloru	
		^{US-} 6,539,068	03-25-2003	Hebron et al.	
		^{US-} 6,571,089	05-2003	Richards et al.	
-		^{US-} 6,586,999	07-04-2003	Richley	
		^{US-} 6,678,321	01-13-2004	Graham et al	
		^{US-} 6,690,247	02-10-2004	Kinitis et al.	
		^{US-} 6,721,298	04-13-2004	Vella-Coleiro	
		^{US-} 6,847,267	01-25-2005	Robert Flake et al.	
		^{US-} 6,865,256	03-08-2005	Descamps et al.	
		^{US-} 6,909,877	06-21-2005	Rifheart et al.	
-		^{US-} 6,968,130	11-01-2005	Jin-Yi Pan	
		us- 7,092,693	08-01-2006	Boyden et al.	
		^{US-} 7,167,525	01-01-2007	Santhoff et al.	
		^{US-} 2001/0011930	08-09-2001	Kintis et al	
		^{US-} 2001/0054953	12-27-2001	Paul A Kline	
		^{US-} 2002/0024423	02-28-2002	Paul A Kline	

		FORE	IGN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code ³ -Number ⁴ -Kind Code ⁵ (<i>if known</i>)	MM-DD-YYYY		Or Relevant Figures Appear	T ⁶
						Щ

Examiner	Date	
Signature	Considered	

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

,

Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.1	No.¹ MM-DD-YYYY Number-Kind Code² (f known)	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
		^{US-} 2002/0075972	06-2002	Richards et al.	
		^{US-} 2002/0191690	12-2002	Pendergrass et al.	
		^{US-} 2002/0097821	07-25-2002	Hebron et al.	
		^{US-} 2002/0116720	10-21-2003	Cloonan et al.	
.,		^{US-} 2003/0031191	02-13-2003	El Wardani et al.	
		^{US-} 2003/0129978	07-2003	Akiyama et al.	
		^{US-} 2003/0202537	10-30-2003	Rogerson et	
		^{US-} 2003/0228005	12-11-2003	Melick et al.	
		^{US-} 2004/0125859	07-2004	Green et al.	
		^{US-} 2004/0136438	07-15-2004	Fullerton et al.	
		^{US-} 2004/0142663	07-2004	Richard D Roberts	
•		^{US-} 2004/0198260	10-2004	Molisch et al.	
		^{US-} 2004/0233972	11-25-2004	Karaoguz	
		^{US-} 2004/0233973	11-25-2004	Fullerton et al.	
		us- 2004/174924	09-09-2004	Lakkis et al.	
		^{US-} 2005/0047379	03-2005	Boyden et al.	
		^{US-} 2005/0131922	06-2005	Kennedy et al.	
		^{US-} 2005/069052	03-31-2005	Carbonari	
		US-			

		FORE	IGN PATENT DOCU	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T ⁶
						ļ
						<u> </u>
:						_
						\vdash
	<u> </u>					H
			1			

Examiner	Date	
Signature	Considered	
l Olgitature		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. Approved for use through 12/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO	e required to respond to a concession	Complete if Known
Substitute for form 1449/FTO	Application Number	10/820,328
INFORMATION DISCLOSURE	Filing Date	April 7, 2004
STATEMENT BY APPLICANT	First Named Inventor	John Santhoff
(1)	Art Unit	2611
(Use as many sheets as necessary)	Examiner Name	Curtis B Odom
Sheet 4 of 6	Attorney Docket Number	00125

Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue	T ²
		number(s), publisher, city and/or country where published.	
		ECHELON, "Powerline Communications", 05-16-19978, 50 pages.	
		POWERLINE COMMUNICATIONS, "Powerline Coexistence", White paper, 03-2001, 12 pages.	
		DAN RAPHAELI & EVGENI BASSIN, "A Comparison between OFDM, Single Carrier, and Spread Spectrum for High Data Rate PLC", 04-1999, White paper, 6 pages.	
		MATTHEW WELBORN, "An M-ary Bi-Orthogonal Ultrawideband Communications System", Provisional Application 60/357,638,2/20/2002, pages 1-40.	
		GO HARA, YOSHIHIRO HASE, SHINGO OOMORI, FUJINOBU TAKAHASHI & RYUJI KOHNO, "Foundation Study on the Application of UWB Impulse Radio to ROF", 2002 Society of Electronics, Information and Communication Engineers Genereal Conference, March 27-30, 2002, 2 pages.	
		WIN MOE Z et al., "Ultra-Wide Bandwidth Time-Hopping Spread-Spectrum Impulse Radio for Wireless Multiple-Access Communications", April 2000.	
		STEPHEN GROSSMAN, Existing In-Home Coax Can Support Data Comm, Eiectronic Design, March 5, 2001, 3 pgs	
		AUTOMATION SECURITIES AND TECHNOLOGY, homeautomation.net, 5 pgs	
		KEN DAVIDSON, CEBus Goes Coax, The Computer Applications Journal, February/March 1992, 3 pgs, Issue 25	
		JULIE JACOBSON, Coax Gaining Favor for In-Home Networks, Home Networking News, June 2002, 5 pgs	

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO	Complete if Known		
Customate for form 14450. Te	Application Number	10/820,328	
INFORMATION DISCLOSURE	Filing Date	April 7, 2004	
STATEMENT BY APPLICANT	First Named Inventor	John Santhoff	
(I to a company objects on processor)	Art Unit	2611	
(Use as many sheets as necessary)	Examiner Name	Curtis B Odom	
Sheet 5 of 6	Attorney Docket Number	00125	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		BUSINESS WIRE, Entropic to Detail 270Mbps Home Networking Over COax at Communications Design Conference Wednesday, March 31, March 30, 2004, 2 pgs	
		ENTROPIC COMMUNICATIONS, Core Technology Description, entropic-communications.com, 2 pgs	
		JULIE JACOBSON, Coax Gets Consortium of its Own, Home Networking News, May 2001, 2 pgs	
		NOAM GERI, Hybrid Coax-Wireless Multimedia Home Networks Using 802.11 Technology, Texas Instruments White Paper, March 2003, 7 pgs	
		COAXSYS, 10/100 Ethernet Products, coaxsys.com, 2pgs	
		PRNEWSWIRE, True Plug & Play Home Multimedia Network Debuts at NCTA, Silicon Strategies, May 4, 2004, 3 pgs	
		YUE GUANG-RONG & GE L I-JIA, "Summaries of Ultra-Widebandwidth Radio", Journal of PLA University of Science and Technology, Volume 3 Number 2, April 2002, 6 pages.	
		China Academic Journal Electronic Publishing House, CATV AND NETWORK, 2001, 3 pages.	
		"CRAMER, J.M.; et al., ""On the analysis of UWB communication channels"", Military Communications Conference Proceedings, 1999. MILCOM 1999. IEEE Volume 2, 31 Oct3 Nov. 1999 Page(s):1191 - 1195 vol. 2"	
		SCHUTT-AINE, J.E., "High-frequency characterization of twisted-pair cables", Communications, IEEE Transactions on Volume 49, Issue 4, April 2001 Page(s):598 - 601.	

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (12-07) Approved for use through 12/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO				Complete if Known		
Substitute for form 1443/FTO				Application Number	10/820,328	
INF	ORMATION	DIS	CLOSURE	Filing Date	April 7, 2004	
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	John Santhoff	
	(llas as many sha			Art Unit	2611	
(Use as many sheets as necessary)			recessary)	Examiner Name	Curtis B Odom	
Sheet	6	of	6	Attorney Docket Number	00125	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		"KAVEHRAD, M., et al. ""10 Gbps transmission over standard category-5 copper cable"", Global Telecommunications Conference, 2003. GLOBECOM ""03. IEEE Volume 7, 1-5 Dec. 2003 Page(s):4106 - 4110 vol.7"	
		WIN, M.Z.; SCHOLTZ, R.A., "Impulse radio: how it works", Communications Letters, IEEE, Volume 2, Issue 2, Feb. 1998 Page(s):36-38	
		SIWIAK K. et al., "Ultra-wide band radio: the emergence of an important new technology", Vehicular Technology Conference, 2001. VTC 2001 Spring. IEEE VTS 53rd, Volume 2, 6-9 May 2001 Page(s):1169 -1172 vol.2	
		ENGLER, H.F. JR., "Advanced technologies for ultra wideband system design", Electromagnetic Compatibility, 1993. Symposium Record. 1993 IEEE International Symposium on 9-13 Aug. 1993 Page(s):250 - 253 vol.2	
		Belden Cable, Detailed Specifications & Technical Data Category 5E and 6 twisted pair cable, 5 pages	
		SIWIAK, "Ultra-wide band radio: introducing a new technology", Vehicular Technology Conference, 2001. VTC 2001 Spring. IEEE VTS 53rd Volume 2, 6-9 May 2001 Page(s):1088 -1093 vol.2	
		MITCHELL, Broad is the way [ultra-wideband technology]; IEEE Review Volume 47, Issue 1, Jan 2001 Page(s):35-39	
		BRUNO PATTAN, "A Brief Exposure to Ultra-Wideband Signaling", Microwave Journal, December 2003, 5 pages.	
4.7		DAVID LEEPER, "Wireless Data Blaster", Scientific American, May 2002, pages 64-69	

Examiner	Date	
Signature	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.